



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



November 7, 2019

**Federally-Enforceable District-Origin Operating Permit
(FEDOOP)
Statement of Basis**

Source: The Standard Group, LLC
2415 Plantside Drive
Louisville, KY 40299

Owner: The Standard Group, LLC
2415 Plantside Drive
Louisville, KY 40299

Application Documents:	See Table I-9	Administratively Complete:	N/A
Draft Permit:	10/03/2019		
Permitting Engineer:	Aaron DeWitt	Permit Number:	O-0846-19-F
Plant ID:	0846	SIC:	2572
		NAICS:	323110

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

The purpose of this permit is a standard permit renewal.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter less than 10 microns (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). Jefferson County is classified as a nonattainment area for ozone (O₃). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO₂).

Permit Application Type:

<input type="checkbox"/> Initial issuance	Permit Revision	<input checked="" type="checkbox"/> Permit renewal
	<input type="checkbox"/> Administrative	
	<input type="checkbox"/> Minor	
	<input type="checkbox"/> Significant	

Compliance Summary:

<input type="checkbox"/> Compliance certification signed	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Source is out of compliance	<input checked="" type="checkbox"/> Source is operating in compliance

I Source Information**1. Product Description:**

The Standard Group assembles and prepares cartons for several different packaging applications.

2. Process Description:

Lithographic printing, cutting, and gluing.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1	One (1) eight-color lithographic printing press, make Mitsubishi, model V3000LX-8-C-DIS-UR, capacity 16,000 sheets/hr; One (1) seven-color lithographic printing press, make Mitsubishi, model 6HC-7, capacity 10,000 sheets/hr.
U2	One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, model V3000LX-g-DI-C-SMX, capacity 16,000 sheets/hr; One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, model D1000LS, capacity 15,000 sheets/hr.
U3	Five (5) embossing and cutting press; Five (5) straight line folder/gluer; One (1) window gluer; Three (3) process cyclones; Five (5) balers
IA1	Cold solvent parts washer

5. Fugitive Sources:

Unit U3 and IA1 are fugitive sources of emissions.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
29111-14-F	08/09/2014	09/18/2014	Initial	Initial FEDOOP Permit Issuance
29111-14-F (R1)	09/12/2017	10/26/2017	Sig.	Update General Condition 10 to remove GHG.
			Admin	Company name change. Permit format update. Update equipment list for U3 per 6/27/2017 permit application.
O-0846-19-F	10/03/2019	11/07/2019	Renewal	Permit renewal.

7. Construction Permit History:

Permit No.	Effective Date	Description
267-93-C	3/30/93	One (1) six-color offset lithographic press (MIEHLE – Super Sixty)
76-96-C	3/30/96	One (1) seven-color sheet fed printing press (Mitsubishi, SFC-70)
149-01-C	5/21/01	One (1) seven-color sheet fed printing press (Mitsubishi, SFC-7D)
98-06-C	4/30/06	One (1) lithographic press (Mitsubishi, 6HC-7)
99-06-C	4/30/06	Ten (10) folder/gluers
88-09-C	5/31/09	One (1) eight-color sheet fed lithographic printing press (Mitsubishi, V3000LX-8-CDIS-U-R)
170-09-C	8/31/09	One (1) cutting press (BOBST, Expertcut 106 LER)
34375-12-C	3/6/12	One (1) six-color sheet fed lithographic press (Mitsubishi, D1000LS)
35691-12-C	8/15/12	One (1) six-color sheet fed lithographic press (Mitsubishi, V3000LX-g-DI-C-SMX)

8. Application and Related Documents

Document Number	Date	Description
21664	3/6/2019	FEDOOP Renewal Application Question and Answer
22446	4/30/2019	FEDOOP Expiration Reminder for 29111-14-F (R1)
23005	6/13/2019	District reminder that applications due by July 1, 2019
23016	6/13/2019	Standard questions of required application forms
23017	6/13/2019	District response to questions of required application forms
2823	7/16/2019	District request to submit applications
2938	7/19/2019	Standard to be in touch regarding applications the following week
2933	7/19/2019	Standard submittal of application 100a
2973	7/22/2019	District request to confirm application details and submit with date of submission if correct
2974	7/22/2019	Standard submission of complete 100b forms
2976	7/22/2019	Standard to submit each 100b and 100p individually
2977	7/22/2019	U1 100b
2978	7/22/2019	U2 100b
2979	7/22/2019	U3 100b
2980	7/22/2019	100p

9. Emission Summary

Pollutant (ton/yr)	CO	NO_x	SO₂	PM₁₀	VOC	Total HAP	Single HAP
Actual Emissions 2009	0	0	0	2.63	47.25 ¹	1.64	<1.0
Major source trigger (based on PTE)	No	No	No	No	Yes	No	No

¹ The VOC emissions from the source have been decreased since 2009. Now the source can meet the 25 tons per year STAR exempt FEDOOP emission limit.

10. Applicable Requirements

☐ 40 CFR 60 ☒ SIP ☐ 40 CFR 63
☐ 40 CFR 61 ☒ District Origin ☐ Other

11. Referenced Federal Regulations:

The source has no federal requirements.

12. Non-Applicable Regulations:²

Regulation	Title	Reason for Non-applicability
5.00	Definitions	STAR Exempt
5.01	General Provisions	STAR Exempt
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	STAR Exempt
5.21	Environmental Acceptability for Toxic Air Contaminants	STAR Exempt
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	STAR Exempt
5.23	Categories of Toxic Air Contaminants	STAR Exempt

² The company requested limits to be exempt from the STAR regulations.

II Regulatory Analysis

1. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. The Standard Group does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

2. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
6.09	Standards of Performance for Existing Process Operations	Applies to each process operation that is not otherwise regulated by any other portion of Regulation 6 and was in existence or had a construction permit issued by the District by September 1, 1976.
6.18	Standard of Performance for Solvent Metal Cleaning Equipment	Establishes VOC standards for cold cleaners that remove soluble impurities from metal surfaces.
7.08	Standards of Performance for New Process Operations	Equipment installed after September 1, 1976 and subject to the PM emission standard.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	Establishes VOC standards for affected facility constructed after June 13, 1979 for VOC.

b. Plantwide

The Standard Group is potentially major for VOC. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the VOC less than 25 tons per year, to be classified as a FEDOOP STAR-Exempt source as defined by Regulation 5.00, section 1.13.5.

Lithographic printing presses (E1, E2, E3, and E4) and folder/gluer machines (E11, E12, E13, E14, E15, and E16) are subject to Regulation 7.25. Each lithographic printing press has a BACT VOC standard established by construction permit. Total VOC emission of all non-BACT facilities is subject to the 5 tons per year VOC standard.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. The Standard Group has requested emission limits of less than 25 tons per year for all criteria pollutants to be considered exempt from local TAC (STAR) regulations, as defined by Regulation 5.00, section 1.13.5.

Regulation 2.17, section 5.2, requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit regular reports to show compliance with the permit. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.1. The compliance reports are due within 60 days of the end of the reporting period:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

c. Emission Unit U1 – Lithographic printing presses

EP	Description	Applicable Regulations
E1	One (1) eight-color lithographic printing press, make Mitsubishi, capacity 16,000 sheets/hr	7.25
E4	One (1) eight-color lithographic printing press, make Mitsubishi, capacity 10,000 sheets/hr	7.25

i. Standards

(1) VOC

- (a) Construction permit 88-09-C established the 12-month total VOC emission standard for emission point E1.
- (b) Construction permit 98-06-C established the 12-month total VOC emission standard for emission point E4.
- (c) According to Regulation 7.25, section 3, construction permit 88-09-C established VOC content BACT limits for the raw materials used by emission point E1.

- (d) Regulation 7.25, section 3 establishes operating standards for lithographic printing presses.
- (e) This unit is subject to plantwide standards for VOC.

d. Emission Unit U2 – Lithographic printing presses

EP	Description	Applicable Regulations
E2	One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, capacity 16,000 sheets/hr	7.25
E3	One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, capacity 15,000 sheets/hr	7.25

i. Standards and Operation Limits

- (1) VOC
 - (a) Construction permit 35691-12-C established the 12-month total VOC emission standard for emission point E2.
 - (b) Construction permit 34375-12-C established the 12-month total VOC emission standard for emission point E3.
 - (c) According to Regulation 7.25, section 3, construction permit 35691-12-C and 34375-12-C established VOC content BACT limits for the raw materials used by emission point E2 and E3.
 - (d) Regulation 7.25, section 3 establishes operating standards for lithographic printing presses.
 - (e) This unit is subject to plantwide standards for VOC.

e. Emission Unit U3 – Cutting presses and folders/gluer

EP	Description	Applicable Regulations
E6, E7, E8, E9, E10	Five (5) embossing and cutting presses, capacity 9, 000 sheets/hr each	7.08
E11, E12, E13, E14, E15	Five (5) straight line folder/gluer	7.08, 7.25
E16	One (1) window gluer	7.08, 7.25
E17, E18, E19	Three (3) process cyclones	6.09
E20, E21, E22, E23, E24	Five (5) balers	6.09, 7.08

i. Standards and Operation Limits

- (1) Opacity
 - (a) Regulation 6.09, section 3.1 and Regulation 7.08, section 3.2 establish opacity standard for this unit.
- (2) PM
 - (a) Emission standard for PM is determined in accordance with Regulation 6.09, section 3.2 or Regulation 7.08, section 3.1.2, and based on capacity of the equipment.
- (3) VOC
 - (a) Total VOC emission of all non-BACT facilities is subject to the 5 tons per year VOC standard.
 - (b) This unit is subject to plantwide standards for VOC.

III Other Requirements**1. Temporary Sources:**

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any alternative operating scenarios.

5. Compliance History:

There are no records of any violations of the terms of the present or prior construction or operating permits.

6. Calculation Methodology or Other Approved Method:

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

Table 3 – Calculation Methods and Emission Factors

Unit ID	Emission Point ID	Equipment Description	Pollutant	Calculation Methods	Emission Factor, Uncontr.	Control Efficiency	Emission Factor, Contr.	Unit
U1	E1, E4	Litho press	VOC, HAP	Mass balance method, see Note 1.				

Unit ID	Emission Point ID	Equipment Description	Pollutant	Calculation Methods	Emission Factor, Uncontr.	Control Efficiency	Emission Factor, Contr.	Unit
U2	E2, E3	Litho press						
U3	E6-E10	Cutting press	PM/PM ₁₀ /PM _{2.5}	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E11-E16	Folder/gluer	VOC	Mass balance method based on glue used				
	E17-E19	Process cyclone	PM/PM ₁₀ /PM _{2.5}	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E20-E23	Baler	PM/PM ₁₀ /PM _{2.5}	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E24	Baler	PM/PM ₁₀ /PM _{2.5}	Engineer Judgment	0.001	95%	0.00005	lb/lb scrap
IA1	E25	Parts washer	VOC, HAP	Mass balance method based on cleaner used				

Note 1:

The VOC and HAP emissions from off-set lithography sheet-fed presses can be calculated according to the following methodology:

$$E_{VOC} = (I_{VOC})(I_{Ret}) + (FS_{VOC}) + (BW_{VOC}) + (RW_{VOC}) + (C_{VOC}) + (CS_{VOC})(R)$$

E_{VOC} = lb VOC Emissions

I_{VOC} = lb of sheet-fed ink used × weight % VOC in each ink

I_{Ret} = 0.1 (1 – Ink oil retention factor of 0.9 for non-heatset inks)

FS_{VOC} = Fountain solution used (gallons) × VOC content of fountain solution as applied (lb/gal)

BW_{VOC} = Blanket wash used (gallons) × VOC content of blanket wash as applied (lb/gal)

RW_{VOC} = Roller wash used (gallons) × VOC content of roller wash as applied (lb/gal)

C_{VOC} = Coatings used (gallons) × VOC content of coating as applied (lb/gal)

CS_{VOC} = Cleanup solvent used (gallons) × VOC content as applied (lb/gal)

R = 1.0 or 0.50 (Fraction of cleanup solvent unrecovered)

An “R” factor of 0.50 (50 percent VOC credit) may be used for solvents (vapor pressure ≤ 5 mmHg at 68°F) used to manually clean press components if the rags/wipes used to manually clean press components are stored in closed/sealed containers immediately after use and the company can document the quantity of solvent recovered.

This equation is also used for HAP emissions calculation.

Note 2:

The PM/PM_{2.5}/PM₁₀ emissions from emission unit U3 can be calculated according to the following methodology:

$$E_{PM} = (T)(EF)$$

E_{PM} = ton PM Emissions

T = throughput, ton/yr

EF = Emission factor, 0.1% per engineering judgement

7. Insignificant Activities

Equipment	Qty	PTE (ton/yr)	Regulation Basis
Embossing and cutting press (E6, E7, E8, E9, E10) (See Emission Unit U3)	5	0.44 PM ₁₀	Regulation 2.16, section 1.23
Straight line folder/gluer (E11, E12, E13, E14, E15) (See Emission Unit U3)	5	1.94 VOC	Regulation 2.16, section 1.23
Window gluer (E16) (See Emission Unit U3)	1	1.14 VOC	Regulation 2.16, section 1.23
Process cyclone (E17, E18, E19) (See Emission Unit U3)	3	0.44 PM ₁₀	Regulation 2.16, section 1.23
Baler (E20, E21, E22, E23, E24) (See Emission Unit U3)	5	0.44 PM ₁₀	Regulation 2.16, section 1.23
Parts washer (See Emission Unit IA1)	1	0.70 VOC	Regulation 1.02, Appendix A

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

8. Basis of Regulation Applicability for IA units

EP	Description	Applicable Regulations
E25	One (1) cold solvent parts washer, capacity 33 gallons	6.18

a. Emission Unit IA1 – Cold solvent parts washer

i. Standards and Operation Limits

(1) VOC

- (a) Regulation 6.18, section 4.1 through 4.3 establishes equipment requirements, operating requirements, and material requirements for cold cleaners.

ii. Monitoring and Recordkeeping

(1) VOC

- (a) Regulation 6.18, section 4.4 establishes record keeping requirements for cold cleaners.